PRELIMINARY ACCIDENT REPORT

Accident and Incident Investigations Division

Accident
- Preliminary Report -
AIID Ref No: CA18/2/3/10644

Figure 1: The file picture of the accident gyrocopter. (Source: Owner)

Description:

On Thursday afternoon, 12 March 2026, a pilot on-board a Magni MTO Sport gyrocopter with registration ZU-RDP took off on a private flight from Mokopane Aerodrome (FAQR) in Limpopo province with the intention to land at the same aerodrome. The gyrocopter flight folio page serial number 033 did not show a recording of fuel upliftment before the flight. The owner of the gyrocopter stated that the gyrocopter completed two flights on that morning during which the pilot, who was also an approved person (AP), felt severe cockpit vibrations. *This anomaly was not recorded in the flight folio after the two flights*. The pilot prepared the gyrocopter for the third flight to determine the source of the vibrations. The gyrocopter took off from Runway 18 and climbed to 300 feet (ft) above ground level (AGL); it remained in the vicinity of the aerodrome. The pilot executed two short left turns and routed north. During this time, one of the three main rotor blades broke off. Consequently, the pilot lost control of the gyrocopter and it crashed on a field near Runway 18. The gyrocopter was destroyed during the accident sequence; the pilot was fatally injured.

Occurrence Details

Reference Number	**:** CA18/2/3/10644
Occurrence Category	**:** Accident (Category 1)
Type of Operation	**:** Private (Part 94)
Name of Owner	**:** Willem B. Van Niekerk
Aircraft Registration	**:** South African
Aircraft Make and Model	**:** AutoGyro GmbH / Magni MTO Sport gyrocopter
Nationality	**:** South African
Registration Marks	**:** ZU-RDP
Place	**:** Mokopane Aerodrome (FAQR), Limpopo Province
Date and Time	**:** 12 March 2026 at 1610Z
Injuries	**:** Fatal
Damage	**:** Destroyed

Purpose of the Investigation

In terms of Regulation 12.03.1 of the Civil Aviation Regulations (CAR) 2011, this report was compiled in the interest of the promotion of aviation safety and the reduction of the risk of aviation accidents or incidents and not to apportion blame or liability.

All times given in this report are Co-ordinated Universal Time (UTC) and will be denoted by (Z). South African Standard Time is UTC plus 2 hours.

Investigation Process

The Accident and Incident Investigations Division (AIID) was notified of the occurrence involving a Magni MTO Sport gyrocopter which occurred at FAQR on 12 March 2026 at 1610Z. The occurrence was classified as an accident according to the CAR 2011 Part 12 and the International Civil Aviation Organisation (ICAO) STD Annex 13 definitions.

The AIID has appointed an investigator-in-charge (IIC) and a co-investigator to conduct a full investigation. The investigators were dispatched to the site. Notifications were sent to the State of Registry, Operator, and Design and Manufacturer in accordance with the CAR 2011 Part 12 and the ICAO Annex 13 Chapter 4. The states did not appoint an accredited representative and/or advisor. The AIID will lead the investigation and issue the final report of this accident in accordance with the CAR 2011 Part 12 and the ICAO Annex 13.

The information contained in this preliminary report is derived from the information gathered during the on-going investigation into the occurrence. Later, an interim or final report may contain altered information in case new evidence is found during the on-going investigation that requires changes to the information depicted in this report.

The AIID reports are made available to the public at:
https://www.caa.co.za/industry-information/accidents-and-incidents/

Notes:

1. *Whenever the following words are mentioned in this report, they shall mean the following:*
   Accident — this investigated accident
   Aircraft — the Magni MTO Sport gyrocopter involved in this accident
   Investigation — the investigation into the circumstances of this accident
   Pilot — the pilot involved in this accident
   Report — this accident report

2. *Photos and figures used in this report were taken from different sources and may have been adjusted from the original for the sole purpose of improving clarity of the report. Modifications to images used in this report were limited to cropping, magnification, file compression; or enhancement of colour, brightness, contrast; or addition of text boxes, arrows, or lines.*

Disclaimer

Table of Contents

Abbreviation	Description
°	Degrees
°C	Degrees Celsius
AGL	Above Ground Level
AFM	Aircraft Flight Manual
AIID	Accident and Incident Investigations Division
AP	Approved Person
C of R	Certificate of Registration
CRS	Certificate of Release to Service
FAQR	Mokopane Aerodrome
Ft	Feet
Gyro	Gyrocopter
hPa	Hectopascal
Kt	Knots
LSA	Light Sport Aircraft
M	Metres
METAR	Meteorological Aerodrome Report
NTCA	Non-type Certified Aircraft
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
QNH	Altitude Above Mean Sea Level
VNL	Valid only with correction for defective near vision
WCM	Weight Shift Control Microlight
Z	Zulu (Term for Universal Co-ordinated Time - Zero Hours Greenwich)

1. FACTUAL INFORMATION

1.1. History of Flight

1.1.1. On Thursday afternoon, 12 March 2026, a pilot on-board a Magni MTO Sport gyrocopter with registration ZU-RDP took off on a private flight from Mokopane Aerodrome (FAQR) in Limpopo province with the intention to land at the same aerodrome. The flight was conducted under visual meteorological conditions (VMC) and under the provisions of Part 94 of the Civil Aviation Regulations (CAR) 2011, as amended.

1.1.2. The gyrocopter flight folio page serial number 033 did not show a recording of fuel upliftment before the flight. Earlier on the same morning, the gyrocopter executed two flights during which the pilot, who was also an approved person (AP), felt severe cockpit vibrations. This defect was not recorded in the flight folio. Later, the pilot prepared the gyrocopter for the third flight to determine the source of the vibrations. The owner of the aircraft stated that the pilot had started the engine, taxied, performed an engine run-up and initiated a take-off from Runway 18. The gyrocopter climbed to 300 feet (ft) above ground level (AGL); it remained in the vicinity of the aerodrome. The pilot completed two short left turns and routed north. During this time, one of the three main rotor blades broke off. Consequently, the pilot lost control and the gyrocopter crashed on a field near Runway 18. The gyrocopter was destroyed during the accident sequence; the pilot was fatally injured.

1.1.3. The accident occurred within the borders of FAQR at Global Positioning System (GPS) co-ordinates determined as 24°13’50.87” South 28°59.’03.755” East, at an elevation of 4 911 feet (ft).

Figure 2: The aerodrome layout and the approximate accident site (red arrow). (Source: Google Earth)

1.2. **Injuries to Persons**

1.2.1. The pilot was fatally injured.

Injuries	Pilot	Crew	Pass.	Total On-board	Other
Fatal	1	-	-	1	-
Serious	-	-	-	-	-
Minor	-	-	-	-	-
None	-	-	-	-	-
Total	**1**	**-**	**-**	**1**	**-**

Note: Other means people on the ground.

1.3. **Damage to Aircraft**

1.3.1. The aircraft was destroyed during the accident sequence.

Figure 3: The wreckage at the accident site.

1.4. **Other Damage**

1.4.1. None.

1.5. Personnel Information

Nationality	South African	Gender	Male	Age	70
Licence Type	National Pilot Licence (NPL)				
Licence Valid	Yes	Type Endorsed	Yes		
Ratings	Grade A Instructor				
Medical Expiry Date	30 November 2027				
Restrictions	Valid only with suitable corrective lenses for defective near vision (VNL)				
Previous Accidents	None				

Note: Previous accidents refer to past accidents the pilot was involved in, when relevant to this accident.

Flying Experience:

Total Hours	9 219.6
Total Past 24 Hours	Unknown
Total Past 7 Days	Unknown
Total Past 90 Days	Unknown
Total on Type Past 90 Days	Unknown
Total on Type (for period 1 November 2018 – 2 December 2025)	735.8

1.5.1. The hours captured above were derived from the values recorded in the last entry in the pilot's logbook on 2 December 2025.

1.5.2. The pilot had a National Pilot Licence (NPL) that was initially issued on 23 October 1978 under the provisions of Part 61 of the CAR 2011. The licence was renewed on 12 January 2026 with an expiry date of 1 December 2027.

1.5.3. The pilot had a Class 4 aviation medical certificate that was issued on 8 November 2024 with an expiry date of 30 November 2027. The pilot had a restriction to wear suitable corrective lenses for defective near vision (VNL).

1.6. Aircraft Information

1.6.1. Aircraft Description (Source: Aircraft Flight Manual [AFM])

The Magni MTO Sport is a two-seater gyrocopter. It is powered by a four-cylinder, air-cooled, four-stroke, dual-ignition 100 horsepower (hp) Rotax 914 UL engine in pusher configuration. The gyrocopter is designed, tested and certified according to the German design specifications for microlight. The gyrocopter is equipped with two bladed, semi-rigid, teetering rotor system which comprises high strength aluminium extruded rotor

blades, a hub bar, and a common teeter hinge assembly. The rotor blades feature an aerodynamic profile suitable for rotorcraft which, in combination with its relative centre-of-gravity, provides aerodynamic stability by eliminating negative blade pitching moments and flutter tendency. The hollow blade profile is sealed at both ends by plastic blade caps. The aluminium rotor hub is pre-coned by the natural coning angle of the blades and connects the blades firmly to each side using six (6) fitting bolts and a clamping profile. To compensate for asymmetric air flow in forward flight, the blades are free to teeter. The hinge consists of teeter tower, teeter bolt and teeter block.

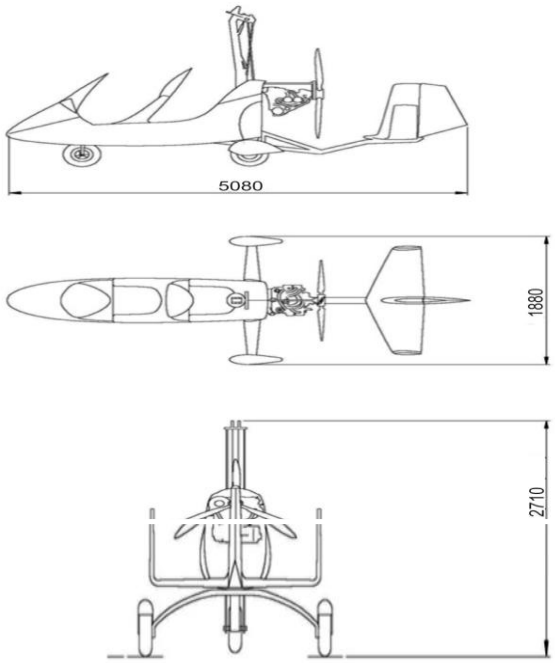

Diagram 1: The three-dimension view of the MTO Sport gyrocopter. (Source: AMM)

Airframe:

Manufacturer/Model	AutoGyro GmbH / Magni MTO Sport Autogyro	
Serial Number	33ZA2007	
Year of Manufacture	2008	
Total Airframe Hours (At Time of Accident)	437.4	
Last Inspection (Date & Hours)	9 March 2026	437.1
Hours Since Last Annual Inspection	0.3	
CRS Issue Date	30 March 2025	
ATF (Issue Date & Expiry Date)	05 May 2025	30 April 2026
C of R (Issue Date) (Present Owner)	17 April 2013	
Type of Fuel Used	Mogas	
Operating Category	Part 94	
Previous Accidents	None	

Note: Previous accidents refer to past accidents the aircraft was involved in, when relevant to this accident.

Engine:

Manufacturer/Model	Bombardier Rotax GmbH / 914 UL
Serial Number	6773114
Part Number	Unknown
Hours Since New	437.4
Hours Since Overhaul	Time Between Overhaul (TBO) interval is 2 000 hours. TBO not reached

Propeller:

Manufacturer/Model	Unknown
Serial Number	471
Part Number	HTC172CCW-3B
Hours Since New	437.4
Hours Since Overhaul	N/A

1.6.2. The gyrocopter had a valid Certificate of Registration (C of R) that was issued by the Regulator (SACAA) on 17 April 2013.

1.6.3. The gyrocopter had an Authority-to-Fly (ATF) Certificate that was issued by the Regulator on 5 May 2025 with an expiry date of 30 April 2026.

1.6.4. The last 100-hour annual inspection of the gyrocopter was certified on 9 March 2026 at 437.1 total airframe hours. The Certificate of Release to Service (CRS) was issued on 9 March 2025 with an expiry date of 29 March 2026 or at 535 total hours, whichever occurs first.

1.6.5. The gyrocopter was maintained by an approved person (AP) who had an AP Certificate that was issued on 18 February 2025 with an expiry date of 17 February 2027. The AP had a Category A rating for gyrocopters and a Category C rating for Rotax 914 engine type.

1.7. Meteorological Information

1.7.1. The weather information below was obtained from the Meteorological Aerodrome Report (METAR) that was issued by the South African Weather Service (SAWS), recorded at Polokwane International Airport (FAPP) on 12 March 2026 at 1600Z. The accident site was 34 nautical miles (nm) north-east of FAPP.

Wind Direction	170°	Wind Speed	12kt	Visibility	999m
Temperature	22°C	Cloud Cover	FEW	Cloud Base	ft
Dew Point	17°C	QNH	1024hPa		

1.8. Aids to Navigation

1.8.1. The aircraft was equipped with standard navigational equipment as approved by the Regulator. There were no records indicating that the navigational equipment was unserviceable prior to the flight.

1.9. Communication

1.9.1. The aircraft was equipped with a standard communication system as approved by the Regulator. There were no recorded defects with the communication system prior to the flight.

1.10. Aerodrome Information

1.10.1. The accident occurred within the vicinity of FAQR at GPS co-ordinates determined as 24°13’50.87” South 28°59.’03.755” East, at an elevation of 4 911ft.

Aerodrome Location	Mokopane in Limpopo Province, South Africa
Aerodrome Status	Unlicensed
Aerodrome GPS coordinates	24°13’50.87” South, 28°59.’03.755” East
Aerodrome Elevation	3 500ft
Runway Headings	Runway 18, 010°/ Runway 36, 190°
Dimensions of Runway Used	5 906ft long and 16ft wide
Heading of Runway Used	010°
Surface of Runway Used	Asphalt
Approach Facilities	None
Radio Frequency	124.8 Megahertz (MHz), Unmanned Airfield Procedures

1.11. Flight Recorders

1.11.1. The aircraft was neither equipped with a flight data recorder (FDR) or a cockpit voice recorder (CVR), nor was it required by regulation to be fitted to the aircraft type.

1.12. **Wreckage and Impact Information**

1.12.1. The aircraft impacted the ground in a low forward speed and at a low angle with a high rate of descent and a heading of approximately 19°. On the main wreckage, the investigators noticed that one of the main rotor blades with serial number 1012 had broken off in-flight near the rotor hub bar; the detached portion of the blade was found in a bushy terrain approximately 205ft south-east of the main wreckage. Impact marks were observed on the leading edge. By placing the detached blade opposite the cabin, it was observed that the longitudinal extent of the impact zone on the blade corresponded to the location of the parts found (farther from the main wreckage).

1.12.2. These observations led to the conclusion that the rotor blade hit the gyrocopter's right front section in-flight, as well as the pilot's body. Examination of the rotor control linkage revealed several ruptures at the rotor control fork, as well as damage at the fixed connection point between the rotor control fork and the rotor. Other examinations of the wreckage did not reveal any other damage prior to ground impact. The propellers indicated that the engine was producing a substantial amount of power at impact.

Figure 4: The aerodrome layout and the approximate area where the separated blade was found (yellow pin).

Figure 5: The wreckage at the accident site and the main rotor blade that failed (yellow arrow).

Figures 6 and 7: The portion of the main rotor blade that broke off (left picture). The close-up picture of the blade and the area where it snapped (right picture).

1.13. Medical and Pathological Information

1.13.1. To be discussed in the final report.

1.14. Fire

1.14.1. There was no evidence of a pre- or post-impact fire.

1.15. **Survival Aspects**

1.15.1. The accident was not survivable due to the high-impact forces that were deemed to exceed the maximum threshold tolerance of a human physiology.

1.16. **Tests and Research**

1.16.1. To be discussed in the final report.

1.17. **Organisational and Management Information**

1.17.1. This was a private flight conducted under the provisions of Part 94 of the CAR 2011, as amended.

1.18. **Additional Information**

1.18.1. None.

1.19. **Useful or Effective Investigation Techniques**

1.19.1. None.

2. FINDINGS

2.1. **General**

From the available evidence, the following preliminary findings were made with respect to this accident. These shall not be read as apportioning blame or liability to any organisation or individual.

To serve the objective of this investigation, the following sections are included in the conclusions heading:

- **Findings —** are statements of all significant conditions, events, or circumstances in this accident. The findings are significant steps in this accident sequence, but they are not always causal or indicate deficiencies.

2.2. **Findings**

Pilot

2.2.1. The pilot had a National Pilot Licence (NPL) that was initially issued on 23 October 1978 under the provisions of Part 61 of the CAR 2011. The licence was renewed on 12 January

2026 with an expiry date of 1 December 2027. The gyrocopter type was endorsed in the pilot's licence.

2.2.2. The pilot had a Class IV aviation medical certificate that was issued on 8 November 2024 with an expiry date of 30 November 2027. The pilot was certified medically fit to undertake the flight.

Aircraft

2.2.3. The gyrocopter had a valid Certificate of Registration (C of R) that was initially issued by the Regulator on 17 April 2013.

2.2.4. The gyrocopter had an Authority-to-Fly (ATF) Certificate that was issued by the Regulator on 5 May 2025 with an expiry date of 30 April 2026.

2.2.5. The last 100-hour annual inspection of the gyrocopter was certified on 9 March 2026 at 437.1 total airframe hours. The Certificate of Release to Service (CRS) was issued on 9 March 2025 with an expiry date of 29 March 2026 or at 535 total hours, whichever occurs first.

2.2.6. The aircraft was maintained by an approved person (AP) who had the AP Certificate that was issued on 18 February 2025 with an expiry date of 17 February 2027. The AP had a Category A rating for gyrocopters and a Category C rating for Rotax 914 engine type.

2.2.7. The main rotor blade with serial number 1012 broke off in-flight near the rotor hub bar and the detached portion of the blade was found in a bushy terrain approximately 205ft south-east of the main wreckage. The failed piece of the main rotor blade was recovered for further analysis.

Weather

2.2.8. Inclement weather conditions persisted on the day of the accident; the weather did not have a bearing in this accident.

3. ON-GOING INVESTIGATION

3.1. The AIID investigation is on-going, and the investigators will investigate other aspects of this accident which may or may not have safety implications.

4. SAFETY RECOMMENDATIONS

4.1. General

The safety recommendations listed in this report are proposed according to paragraph 6.8 of Annex 13 to the Convention on International Civil Aviation and are based on the conclusions listed in heading 3 of this report. The AIID expects that all safety issues identified by the investigation are addressed by the receiving States and organisations.

4.2. Safety Recommendation/s

4.2.1. None.

5. APPENDICES

5.1. None.

This report is issued by:

Accident and Incident Investigations Division
South African Civil Aviation Authority
Republic of South Africa